

AMENDMENTS TO THE SPECIFICATION

Paragraph [0021] of the Specification has been amended and the marked-up paragraph follows. A clean version is attached starting on page 10.

[0021] Referring now to FIG. 3, a perspective view of the raytrace for the compact imaging spectrometer 100 is shown. The compact refractive imaging spectrometer 100 comprising an entrance slit 101 for directing light, lens means 102 for receiving the light and refracting the light, an immersed diffraction grating 103 that receives the light from the lens means 102 and defracts the light, the immersed diffraction grating 103 for directing the defracted light back to the lens means 102, and a detector 104 that receives the light from the lens means 102. The imaging spectrometer 100 has a front and a back. The slit 101, the lens means 102, the immersed diffraction grating 103, and the detector 104 fit within an envelope located between the front and the back. The envelope is 3.5 cm by 1.9 cm by 1.2 cm or smaller. In the compact imaging spectrometer 100, the lens 102 is ahead of the grating 103. The lens for receiving light, refracting light, and focusing light is a Germanium lens. The lens has a surface and is an anamorphic asphere on its surface. The lens in one embodiment consists of two or more lenses that are coaxial. Light goes from the entrance slit 101 to the lens 102, which refracts it to the ruled germanium grating 102. The diffracted order then propagates back to the lens 102, which focuses onto the 2D detector array 103. The germanium grating 103 is a wedged prism that is plano on both faces and with the grating ruled on the flat reflective side. In one embodiment the immersed diffraction grating has a refractive surface and is an anamorphic asphere on its refractive surface. In one embodiment the immersed diffraction

grating has a grating surface and is spherical or aspheric on its grating surface. In one embodiment the immersed grating consists of two or more prisms.

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